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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/708,533

Filing Date: March 10, 2004

Appellant(s): CARLSSON ET AL.

MAILED

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Group 3700

Mark A. Davis
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 5-24-2006 appealing from the Office action mailed 12-27-2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

JP 1-30194	NAKAGAWA	2-1989
US 6,060,700	PERLMAN ET AL	5-2000
US 6,759,636	STUTMAN	7-2004
US 4,323,745	BERGGREN	4-1982
US 5,315,084	JENSEN	5-1994
US 4,814,570	TAKIZAKI	3-1989

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3742

2. Claims 21, 29-37, 50-52 and 70 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Perlman et al (US 6,060,700) or Stutman (US 6,759,636).

Nakagawa shows a distributed microwave cooking system, comprising: a microwave generator 1 having an output for providing a single source of microwave energy; multiple cooking elements 9, 10 located remotely from the microwave generator 1; a microwave conduit (branch waveguide 4 having branches) connecting each of the cooking elements to the microwave generator 1; wherein the microwave energy generated by the microwave generator is distributed to the multiple cooking elements through the microwave conduits (see Figures 1-3 and the English abstract). Therefore, Nakagawa shows every feature as claimed except that it does not specify the use of the heating elements 9, 10 as in a vehicle or as a cup warmer.

Perlman shows a microwave oven used inside a vehicle for heating food or as a cup warmer (see Figures 1-3 and col. 6, line 1 – col. 7, line 38). Stutman also shows a microwave oven for used in a vehicle having a door 160 on the top of the housing cabinet 200 (see Figures 2 and 3). It would have been obvious to an ordinary skill in the art at the time of invention to modify Nakagawa to use its device in a vehicle for heating food or beverages as a cup warmer to increase its utilities, in view of the teaching of Perlman or Stutman. The exact connection and location of the cooking elements would have been a matter of engineering expediency depending on the overall structure of the vehicle.

Art Unit: 3742

3. Claims 22-28, 38-43 and 53-63 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Perlman et al (US 6,060,700) or Stutman (US 6,759,636), as applied to claims 21, 29-37, 50-52 and 70 above, and further in view of Berggren (US 4,323,745).

As set forth above, Nakagawa combined with Perlman or Stutman shows every feature as claimed except that it uses a branch waveguide as the microwave transmission conduit. Berggren shows a microwave heating device having a single microwave generator and plural feed ports connected by microwave conduits (43, 44). The conduits are either waveguides or coaxial cables (see Figure 4 and col. 3, lines 3-27). It would have been obvious to an ordinary skill in the art at the time of invention to further modify Nakagawa combined with Perlman or Stutman to use a coaxial cable or a branched waveguide as the microwave transmission conduits for feeding microwave energy from the single microwave source to each heating element depending on the overall system requirement, in view of the teaching of Berggren. Obviously, the use of a coaxial cable provides a flexible connection.

4. Claims 44-49 and 64-69 are rejected under 35 U.S.C. 103(a) as being obvious over Nakagawa (JP 1-30194), in view of Perlman et al (US 6,060,700) or Stutman (US 6,759,636), as applied to claims 21, 29-37, 50-52 and 70 above, and further in view of Jensen (US 5,315,084) or Takizaki (US 4,814,570).

As set forth above, Nakagawa combined with Perlman or Stutman shows every feature as claimed except for the use of a sensor. Jensen shows a microwave oven for heating bottles of

liquid food with the use of a weight sensor 88 as a load sensor to determine the volume of liquid to be heated (see Figure 2 and col. 3, lines 37-56). Takizaki also shows that it is well known in the art of microwave heating devices to include many type of sensing devices including a temperature sensor 11 and a weight sensor 9 to control the heating of food (see Figure 9 and col. 6, line 38 – col. 7, line 4). It would have been further obvious to an ordinary skill in the art at the time of invention to modify Nakagawa combined with Perlman or Stutman to use a temperature sensor and/or a weight sensor to monitor the heating conditions of the food material for better heating control and better food product, in view of the teaching of Jensen or Takizaki.

(10) Response to Argument

Regarding Argument Points A1 and A2, the argument that “the Examiner has failed to identify any motivation, suggestion, or teaching of the desirability of combining Nakagawa with either Perlman or Stutman” to arrive at appellant’s invention is not persuasive. At the outset, the scope of the claimed invention must be first determined. All that is being claimed in claim 21 is a microwave cooking element located with a vehicle with a microwave generator located remotely spaced from the microwave cooking element and a microwave conduit connecting the generator and the cooking element. As set forth above, Nakagawa clearly shows a microwave cooking device having all the structure as claimed except that it does not show the use of its device in a vehicle. Where the microwave cooking device of Nakagawa is used is clearly a choice of the user. The use of a microwave oven is known in any conceivable places, such as, kitchens, cafeteria, camping grounds, mobile homes and of course, vehicles as shown in Perlman and Stutman. It is respectfully submitted that any suitable microwave heating device can be used

in a vehicle in view of the references. Clearly, the need of two or more microwave ovens is shown to be known by Nakagawa (see the "Prior Art" description in the English translation as the Exhibit A at the end of the Appeal Brief"). The advantages for using a plurality of microwave ovens is blatantly obvious, more food can be cooked simultaneously and more people can use at the same time and/or at different locations. To use the microwave cooking ovens of Nakagawa in a vehicle, therefore, would have been readily obvious to an ordinary skill in the art as Nakagawa teaches the use of a plurality of microwave ovens with a single generator remotely from each cooking oven so that each of the ovens may be used separately from each other.

Regarding Argument Point A4, more importantly, claim 51 does not even require a vehicle as it merely recites "a microwave cup warmer for a vehicle including a microwave cooking element for warming the contents of a cup". Obviously, the ovens of Nakagawa can be used for the same purpose as a cup warmer for microwave heating liquid food in a vehicle is shown by Perlman. Therefore, the argument that "the combination is improper" is not well taken. In regard to Argument Point A3, the argument that Nakagawa does not disclose a microwave generator that is "remotely spaced" from a microwave cooking element is not well taken. More particularly, Nakagawa clearly shows in Figures 1 and 2 to use a single microwave generator 1 remotely spaced from the two heating chambers 9 and 10 so that it can be used for supplying microwave energy to one or more heating chambers. The generator 1 is considered remotely spaced from the chambers as they are not formed in a same housing of a conventional oven. The argument that "remotely spaced" means that the oscillator is spaced at some significant distance from the cooking element is without merit as many claims, including claims 21 and 51, do not reflect any location that is significant distance from the heating element. Obviously, the heating chambers

of Nakagawa can be located in different areas so that different users at various locations can selectively and/or simultaneously use one of the heating chambers for cooking food. Regarding Argument Point A5, any location within a vehicle as claimed in claims 29-37 would have been a matter of engineering design expediency as Perlman shows locating the oven in a dashboard storage area (such as the glove compartment) or the console area between two front seats (see Perlman, col. 3, lines 1-32) and Stutman shows securing the oven on a seat with a seat belt (Figures 6 and 7). It is respectfully submitted that the use of the trunk of a vehicle for storing auxiliary devices, such as CD players, batteries is well known. Therefore, to choose any available space in a vehicle for storing an auxiliary device including a microwave generator would have been within the skill of an ordinary artisan. In regard to claims 37, 50, 52 and 70, Stutman shows the well known use of a microwave oven with a top opening door 160 in a vehicle. Locating the door on the top or bottom of the microwave oven, would have been a matter of engineering expediency depending on the relative location of the oven with its supporting structure.

Regarding the Argument Points B1-B4, the argument that “Berggren is in a field which is entirely different from the field of applicants invention” is not well taken as all of the references are directed to microwave heating devices with a microwave supply element for supplying microwave energy from the microwave generator to a microwave heating element. Berggren is clearly pertinent to the problem with which the appellant is concerned as Berggren is merely relied on the teaching of the use of either waveguides or coaxial cables for supplying microwave energy from a single microwave generator to plural feed ports (see Figure 4 and col. 3, lines 3-27). The determination of how the microwave energy is transmitted from a single generator to a

plurality of microwave ports is clearly common to Berggren, Nakagawa and the appellant's claimed invention. One of ordinary skill in the art when facing with a problem on how to supply microwave energy from a single source to a plurality of ports would have clearly found Berggren as a pertinent solution. Therefore, the argument that Berggren is non-analogous art is not persuasive. In regard to Argument Point B2, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, one of ordinary skill would be aware that the use of waveguides or coaxial cables for connecting the microwave generator and the heating elements is well known and therefore the use of either one would have been a mere choice in view of Berggren (see col. 2, lines 55-58). It is respectfully submitted that to use any well known elements in a known way as shown by each of these references would have been readily obvious to an ordinary artisan and needs no explicit teaching.

Regarding Argument Points C1-C3, the use of a sensor for controlling a microwave food heating operation in a microwave oven is well known in the art of microwave ovens as exemplified by Jensen and Takizaki. It is respectfully submitted that the use of a sensor, such as, a temperature sensor (infrared or probe), weight sensor, load sensor (microwave sensor) and gas sensor is routine in the art of microwave ovens (classified in Class 219, subclasses 704-713). To use any of these well known sensors in a microwave oven for better controlling a food

heating operation would have been readily obvious to an ordinary artisan , in view of the explicit teaching of Jensen at col. 3, lines 37-56 and Takizaki at col. 6, line 38 – col. 7, line 4.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this Examiner's answer.

Conclusion

All the features in the claimed invention are shown or suggested in the cited references and the invention as a whole would have been obvious to an ordinary artisan with the references before him/her as set forth above.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Philip H. Leung
Primary Examiner
Group Art Unit 3742

P.Leung/pl
8-4-2006

Conferees:

Robin Evans 
Quang Van 